RHODE ISLAND HEALTH CARE QUALITY PERFORMANCE MEASUREMENT AND REPORTING (HQPMR) PROGRAM

A Review of the Current State of Public Reporting on Health Care Quality Performance: States, Hospitals, and Coalitions

Public Reporting Scan Final Report

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I. Introduction

A. Purpose of Public Reporting Review – The purpose of this document is to present information from several sources -- the literature, existing public reports, local studies, and interviews with business and health coalition representatives -- on the current state of public reporting on health care quality performance. Specifically, this review will present a brief history of reporting on both hospital and health plan performance and an overview of the literature on consumer preferences for health and quality information to provide a context for Rhode Island's reporting initiative. To give a national perspective, reports from other states and coalitions are summarized to indicate the range of sponsorship, types of data points, and availability to the public. Although only a few of these reports have been directly evaluated, they can provide an understanding of the type and scope of information that is currently available to consumers. These specific reports focus on hospitals, as well as on health plans, because much of public reporting has centered on health plan reports.

The methodology used to gather the materials for this review is three-pronged:

- review of the literature on hospital and health plan reporting, with particular emphasis on reporting hospital patient satisfaction;
- interviews with business and health coalitions around the country; and
- Internet queries and review of websites of states and other organizations.

While this review is not exhaustive, it will be useful in the planning and development stages of public reporting on Rhode Island licensed health care facilities, as required by legislative mandate, specifically in decision making about which measures to report, what type of report format to use, and how to present reports to the public.

B. Overview of Reporting on Hospital and Health Plan Performance

1. Historical Perspective – Public reporting of health care performance has received increasing attention in recent years. The Health Care Financing Administration (HCFA) has promoted the development of measures, not only for hospitals, but also for nursing homes and home health care agencies. The Joint Commission on Accreditation of Health Care Organizations (JCAHO) has intensified its efforts to develop quality indicators. With the expansion of the managed care market, there has been a virtual explosion of interest in performance within health care settings, including financial, utilization, clinical, and satisfaction measures. The National Committee on Quality Assurance (NCQA) has helped to focus attention on the need for standardized measurement across health plans with the development of the Health Plan Employer Data and Information Set (HEDIS). In addition to these forces, a more market-oriented perspective among health care organizations generally has meant that provider organizations have directed their attention to the "customer" and to finding ways to assess and demonstrate quality performance.

Against this national backdrop, the State of Rhode Island has mandated a public reporting system for all licensed health care facilities (General Laws, Chapter 23-17.17, the Fogarty legislation) and health care plans (General Laws, Chapter 23-17.13, the Zainyeh legislation) to be developed and disseminated by the Department of Health (HEALTH). This review of

existing evidence and reporting experience is intended to provide a context to prepare for the development of the actual reports that will be distributed to patients and consumers, providers, employers and other purchasers, legislators and policy makers in Rhode Island.

2. Comparison of Facility and Health Plan Reporting – It is important, at the outset, to distinguish between provider facilities and health plans in reporting quality measures. Both of these reporting perspectives may include a wide variety of measures, sometimes the same measure. For example, health plans use facility-based measures in their reports, such as hospital admissions or cesarean section rates. A major difference, however, is the point of reference for the measures. Provider performance reports focus on the individual provider (facility or person) as the unit of analysis, so that comparisons across providers can be made. Health plan performance reporting takes the plan or managed care organization as the unit of analysis; measures are population-based and refer to the composite plan experience involving a group or network of providers. In both cases, the intent is to provide users with information to help them make choices about their health care; in one case they are choosing the provider of services, in the other they are choosing a system that incorporates providers, benefit coverage, and payment. These distinctions may be useful as the information is reviewed.

Provider profiling and managed care plan performance reports have proliferated the market in the last several years, whereas hospital performance reports are less widespread and uniformly adopted. Perhaps one reason is that consumers have more choice in selecting primary care providers, specialists and managed care plans. Conversely, consumers often are more limited in choosing among hospitals as they may be confined to hospitals where their physician has admitting privileges and which are in their health plan's network. In this scan, the focus is on hospital and health plan reporting. Literature on reporting for nursing homes, home care, and ambulatory surgery will be reviewed in the future.

3. Types of Measures Used in Public Reporting – In most performance reporting, four classifications or types of measures are used: financial, utilization, clinical, and satisfaction. *Financial measures* look at the financial health of the provider organization or health plan; indicators include: charges (gross revenue or net revenue) per adjusted admission, costs per adjusted admission, payments by payer and by type of service, average charges per admission, expense per discharge, and total cost by diagnostic or resource utilization groups (e.g., DRGs, RUGs). *Utilization measures* incorporate length of stay, frequency of selected procedures -- for example, coronary artery bypass graft (CABG), angioplasty, and cardiac catherization -- and number of discharges. *Clinical measures* target individual patients and the processes and outcomes of care for those patients. Typical process measures are use of beta blocker medication after acute myocardial infarction (AMI), angio-intensive converter enzyme (ACE) inhibitor medication for low left ventricular ejection fraction (LVEF), and warfarin medication for atrial fibrilation; outcome measures include mortality, complications, and medication errors. *Satisfaction measures* take the perspective of the patients and health care staff. Patient satisfaction with care, discharge process, amount of pain medication administered, and courtesy of staff, and patient willingness to recommend the hospital to friends and family are typical measures. From another perspective, staff satisfaction with work is sometimes used to assess performance of provider organizations.

4. Types of Reports – Reports vary depending on the audience, be it providers, patients/consumers, employers, government, or others. They also vary in the selection of measures, whether process or outcome measures are reported, the formats for presenting performance on those measures, and types of comparisons (if any) that are reported. The term "report card" has been used widely, and often erroneously, to refer to performance reports. When the report includes a scoring component that rates facilities or plans in relation to one another and/or to a benchmark, for example, "better than average, average, worse than average," the term "report card" may be appropriate. It is technically inappropriate; however, to use this term in comparative reports that do not make such assessments. For example, reports that display utilization rates but have no analysis of the degree of difference between the units being compared, that is, do not "grade" each as "better" or "worse" than another, may show comparative data, but they are not true report cards. An inherent difficulty in using the term is that it implies a scoring evaluation of the reported measures that will indicate whether observed differences between providers or plans are meaningful differences.

Underlying comparative reporting, whether or not comparative ratings are included, is the assumption that consumers will use the information to make decisions about hospital or health plan choice. However, the validity of this assumption has yet to be fully assessed, especially with regard to hospitals. Moreover, consumer choice is limited by a number of factors, including the hospitals offered by the insurer and/or health plan, as well as the hospitals used by the physician. Recognition of these limitations can help guide the design and dissemination of the Rhode Island reports.

II. Review of the Literature and Evidence on Information Desired and Used

A. Consumers – In the literature review on quality performance measurement commissioned by HEALTH, Trainor Associates[1] emphasized the need for collecting information from consumers as a critical method for informing the development of performance measures. Much of the information about consumer perspectives on quality performance measures and reporting is derived from studies of health plan satisfaction and choice. These results may be applicable to facility reporting, as well.

1. National and Statewide Consumer Studies – The Kaiser Family Foundation and Agency for Health Care Policy and Research (AHCPR) reported in 1996 on a national study of consumer views of health plan quality.[2, 3] According to the Kaiser study, Americans say quality is a more important concern than costs, benefits, and choice of physician. Family, friends, and physicians are very believable sources about quality of care, while independent evaluating organizations, employers, and government agencies are less trusted. Data collected and reported by an unbiased third party are preferable to data reported by the plan itself. Similarly, data reported by HEALTH should be trusted more than data reported by individual hospitals and health care facilities, although personal sources may be even more valued.

Whether consumers will pay attention to a report card is also an issue. Even consumers who remembered seeing comparative health plan information were no more likely than those who did not see or read it to find it useful in choosing a plan.[4] In the Kaiser/AHCPR study, most people had not seen comparative quality information, and those who had did not use it to

make health care decisions. Studies in Denver and St. Louis found that people who were more health oriented were more likely to remember seeing health plan report cards from their employer, and that people with chronic illnesses and with more visits found the report cards less useful in health plan choice.[5] A recent review of studies evaluating the effects of health plan report cards concluded that there is little evidence to date that consumers use this type of information when choosing a health plan.[6] For example, a study of Massachusetts state employees found no significant effect of a report card on employee health plan choices.[7] What consumers say is useful to them in choosing a health plan may not be what they actually use in making this decision.[8]

Consumers may not be clear about the meaning of specific quality indicators – the terminology, whether "high" or "low" ratings are good, and how measures relate to quality of care. When they do not understand the information or are confused by it, consumers are more likely to ignore the information or consider it unimportant.[8] Among quality care indicators, those that present undesirable events (e.g., hospital mortality after heart attack, hospital-acquired infections) are the least well understood, followed by desirable events (e.g., mammogram rates, immunization rates) and patient ratings of quality and satisfaction, which are the best understood indicators.[9] Consumers appear to be more interested in information comparing physicians than in information comparing health plans, a finding that may have relevance for hospital and facility reporting.[4] If consumers do not see the connection between the organization and the quality of care provided by medical staff, then the facility-based information will not be used. The Foundation for Accountability (FACCT) has been working with several states to develop a prototype consumer report card on health plans.[10] The measures are grouped into three major categories: The Basics, Staying Healthy, and Living With Illness. FACCT found that consumers were most interested in measures related to living with illness. They preferred a report format that displayed plan scores within a range and assigned "grades" of poor, fair, good, or excellent.

2. Rhode Island Consumers – A local consumer survey and focus groups of elderly, low income, recent users of hospital services, non-users of hospital services, and a Spanish language group, commissioned by HEALTH, assessed consumer perspectives on quality of health care services.[11] Although nearly two-thirds of the 454 consumers surveyed by telephone rated health care quality above average to excellent, over one-fourth said that quality had deteriorated in the past 10 years. Two-thirds define quality in terms of the processes of care, and one-third defines quality in terms of "successful treatment" or outcomes of care. Similar to findings from health plan consumer studies, focus groups of consumers with inpatient hospital experience saw the physician in charge of medical care, not the hospital. However, they wanted more quality information about hospitals including outcomes of specific treatment (e.g., mortality, complications, readmission's), experience of physicians, and patient satisfaction.

In contrast to consumer perspectives, providers interviewed for this study focused on outcome measures, such as infection rates and mortality rates, as true indicators of quality.[11] They agree that patients hold physicians responsible for what happens in the hospital, and they believe that an educational component is necessary with public reporting to help consumers understand and use the information.

B. Business and Health Coalitions – Nationwide, business and health coalitions have spurred interest in quality of care and report cards. Moving toward "value purchasing," direct contracting, and other forms of managed competition, "corporations have been the driving force behind the move to compare health care providers and plans based on performance."[12]

1. Employer Perspectives – Despite these initiatives, few employers surveyed in 1997 about health plan quality said the NCQA accreditation (11%) or HEDIS data and information (5%) were very important factors in their selection of health plans.[13] In the annual National Survey of Employer-Sponsored Health Plans,[14] results from over 3,000 large and small employers indicate greatest importance was assigned to cost and accessibility of network providers (86% each) as criteria for selecting/evaluating health plans. Only 44% rated NCQA or other accreditation as "very important" in their selection, and only one-fifth rated the plan's ability to provide HEDIS data this high. Another employer survey in four geographic regions of the country found HEDIS data and consumer satisfaction results available to about half the employers (with the exception of Cleveland) who reported low use. Reasons included lack of relevant and useful information and concerns about methods and timeliness.[15]

2. Partnerships for Performance Reporting – In 1998, the National Business Coalition on Health surveyed its member coalitions and found that nine coalitions were currently working on "hospital report cards."[16] Qualidigm sought to retrieve information directly from these organizations on any work that might parallel the focus of HQPMR. Complete information was obtained through telephone interviews with seven of the nine coalitions contacted (Appendix A). Only two coalitions report on a statewide basis, Pacific Business Group on Health and Vermont Program for Quality in Health Care, Inc. Most report hospital statistics, three also report physician-based measures, and one reports on ambulatory surgery (Heartland Health Care Coalition, Illinois). Only four coalitions report these rates publicly. None of these coalitions report satisfaction with hospital care, although five report on health plan satisfaction, two of them publicly. These and other coalition reports are described in the next section.

C. Providers - A study of the 1993 *ShowMe Buyer's Guide: Obstetrical Services* developed and issued by the Missouri Department of Health found the hospitals responsive to the release of the report.[17] By one year after the report's release, hospitals that had lacked services (such as nurse educator for breast feeding) had instituted them, and clinical outcomes such as cesarean section rates and low birth weight had improved in the expected direction. Similarly, a study of Pennsylvania's hospitals, following the public release of reports on coronary artery bypass graft (CABG) surgery, concluded that "the 'public accountability' provided by these reports galvanizes the interests of hospitals and physicians, pressuring them to make changes that improve treatment effectiveness."[18] Another initiative, the California Hospital Outcomes Project, was based on hospital discharge abstracts collected by the Office of Statewide Health Planning and Development.[19] An evaluation of this publicly reported performance information indicated that information must be timely to be useful to hospitals in making changes, that hospital quality managers want information

about processes of care, as well as outcomes, and that some hospitals used the information to make improvements, while others did not. A report on the Cleveland Health Quality Choice Experience[20] indicates how hospital performance data can be used for quality improvement.

These experiences highlight an important distinction between public reporting and quality improvement, especially from the provider's perspective. While these two purposes may be complementary, they have essentially different intents. Public reporting is implemented to provide consistent comparative data on standardized quality performance measures across hospitals or other health care facilities in a format that consumers can understand and relate to their own lives. Such reports may, indeed, point to areas where improvement is desirable in a particular hospital. However, in order to provide comparative information across facilities, the public report must focus on quality measures that are meaningful across all settings, rather than any specific hospital's needs or desires for quality improvement. For example, if one hospital wants to improve the functioning of a specialty clinic, a service that few other hospitals in the community provide, such a specific quality improvement focus might not be included in a public report.

III. Existing Hospital and Health Plan Performance Reports

While reporting on health plans is becoming more standardized based on reporting requirements established by HEDIS and FACCT, variation in hospital reporting requirements is now receiving considerable attention. JCAHO requires reporting of selected performance measures, but the specification of these measures initially was left to each hospital's vendor for ORYX reporting. However, JCAHO is moving toward adopting core measure sets that will result in measures that are comparable across all hospitals. Indicators that all hospitals now report describe staff to patient ratios, bed size, tax status of a hospital, utilization rates and financial indicators. Such measures do not describe the quality of health care delivered, nor are they informative about the processes or outcomes of care for given procedures or disease states. Reporting on consumer satisfaction in existing reports, when available, tends to focus on satisfaction with health plans or plan physicians. A few reports include consumer satisfaction with hospitals, notably the California Healthcare Association, the Ontario (Canada) Hospital Association, the Cleveland (OH) and Western New York (Niagara) coalitions, and the Massachusetts Health Quality Partnership.

The reports described below were selected because they are widely recognized and relevant to the Rhode Island initiative. They represent only a portion of the universe of hospital and health plan performance reporting but serve as examples of the types and scope of reporting that can inform the planning for public reporting on Rhode Island health care facilities. This review of hospital and health plan reports is not intended to be exhaustive; rather it provides an overview of the existing context of performance reporting. Additional information on quality reporting was provided to HEALTH in an earlier document.[21] The reports presented below are categorized by sponsorship: state reports; hospitals/health systems reports; and business/health coalition reports. Where the report is made available to the public, for example, through a Web site, this information is included. (See Appendix B for summary of hospital performance public reports.) No evaluation of the Web sites has been conducted or made available, and such evaluation is beyond the scope of this paper. The Web sites were visited and are presented for informational purposes only to indicate public access.

A. State Reports – More than 30 states, including Rhode Island, have mandates to collect hospital administrative data (NAHDO 2000).[22] While not all state health data organizations make the data available to outside groups, some, including those in Massachusetts, New York, Iowa, Rhode Island and California, create and disseminate administrative data files to qualified applicants. For other states, such as Connecticut, the data are controlled by the hospitals through their local hospital associations, although hospital-specific data are available on written request through the Freedom of Information Act. A number of states publish public reports on health plan performance.

1. Maryland – The Maryland Health Care Access and Cost Commission (since October 1, 1999 known as the Maryland Health Care Commission or MHCC) produces an annual guide to commercial HMOs in the state. The guide includes performance ratings based on HEDIS measures as specified by NCQA, including patient satisfaction, now measured by the Consumer Assessment of Health Plans Survey (CAHPS). Comparative results are posted on the Web site (**www.mhcc.state.md.us**) in two forms: 1) the actual percentages for each plan on specific items; and 2) symbols (dark, half/half, light circles) to indicate statistically significantly above average, average, or below average for all Maryland HMOs. Print copies are available from the Commission.

2. New Jersey – The New Jersey State Department of Health and Senior Services has published a report comparing health plans in the state. The report is based on HEDIS measures and CAHPS. Included are consumer assessments of access to care and services, satisfaction with physicians, and performance measures such as mammography screening rates, immunizations for children, and eye exams for adult diabetics. The report is available on the state Web site (**www.state.nj.us/health**). New Jersey also published for consumer use a hospital-specific report of Coronary Artery Bypass Graft Surgery 1994-95 in 1997, which included risk-adjusted mortality rates. The data were audited by the New Jersey PRO. They planned to publish this report annually.[23]

3. New York – New York State Department of Health has issued periodic reports on cardiac procedures in the state. The reports include risk-adjusted mortality rates for hospitals and surgeons performing Cardiac Artery Bypass Graft (CABG) surgery. An analysis of these reports over time[24] indicated that both hospitals and physicians with better outcomes increased market share following publication of the reports, suggesting that both consumers and referring physicians paid attention to the reports.

4. Pennsylvania – The Pennsylvania Health Care Cost Containment Council is an independent state agency established in 1986 by the Pennsylvania General Assembly. A major responsibility is "to collect, analyze and make available to the public data about the cost and quality of health care in the state." The report card focuses on 15 Diagnosis Related Groups (DRGs) and presents comparative data on risk-adjusted mortality, risk-adjusted length of stay, and average charge. Data are collected annually by the Council from hospital discharge records and risk adjusted using Atlas; the information is audited internally. Consumers can access the report on the Council's Web site (**www.phc4.org)**. The Web site contains sections on the purpose of the report, what is measured, why it is important, and how to use it. A print report is available.[25]

5. Utah – The state Office of Health Data Analysis supports the Utah Health Data Committee in its legislative mandate to collect, analyze, and disseminate health care information to the public. They publish data reports on hospitals and health plans. The *Utah Maternity Hospital Guide* (1997) and the *Utah Hospital Consumer Guide* (1996) provide comparative data on hospital charges. Several comparative reports are available online, including *Hospitalizations for Conditions Related to Lifestyle or Behavior* and *Hospital Inpatient Quality Indicators* based on Healthcare Cost and Utilization Project 3 (HCUP) data and AHCPR indicators. Current information on the Web site **(www.health.state.ut.us)** indicates that the latest hospital report is based on 1997 discharge data. HMO satisfaction data are also reported for 1997.

6. Virginia - The Virginia Department of Health contracts with Virginia Health Information, a non-profit corporation, which provides patient level data on hospitals and other licensed health care facilities, as mandated by the State Legislature (July, 1993). The annual Industry Report on Virginia Hospitals includes 18 indicators in the following categories: charges, costs, productivity, financial viability, and community. These are measures of hospital efficiency. Facility-specific data are reported and available to the public by contacting VHI or on the Web site **(www.vhi.org).** Information available on the Web site is organized by area of the state and presented as a financial "profile" for each hospital. The 18 indicators are presented along with regional benchmarks and an arrow to indicate the "desired direction" of the hospital's indicator, up or down, in relation to the benchmarks. Also reported are 13 indicators for nursing homes. A Consumer's Guide to Hospitals was published in October 1999.

B. Hospitals/Health Systems Reports

1. Colorado – The Colorado Hospital Association (CHA) publishes an annual public report on hospital charges and length of stay for high volume hospitalizations, adjusted for severity of illness (using the 3M Health Information System APR-DRG program). Published annually since 1988, it provides the public with timely, accurate and useful information.[26] Data are collected electronically on a monthly basis and audited using HCFA and in-house edits. The report is disseminated to public, academic and hospital libraries. Another annual report is a compendium of hospital-specific financial and utilization information, including a ranking of hospitals for selected utilization indicators such as admissions, surgeries and home health visits (**www.cha.com)**. CHA also sponsors participation for member hospitals in the Maryland Quality Indicator Project; 10 Colorado hospitals participate in inpatient/outpatient indicators. CHA has initiated a patient satisfaction project, partnering with The Picker Institute. Quarterly reports are currently available to those hospitals participating in the pilot project. Hospitals are compared to other Colorado hospitals and to a national database.

2. Iowa – The Iowa Hospital and Health Systems has established the IH&HS Comparative Outcome Profile Program (**www.ihhs.org**). The 92 hospitals and health systems that have signed participant agreements report outcome measures monthly or quarterly to IH&HS via diskette from software that is provided through a program licensed from the Indiana Hospital & Health Association. IH&HS reports back to the hospitals using peer groupings based on bed size category, case mix index category, and other hospital and patient care characteristics.

Data are compared to benchmarks. This program has met the criteria of the JCAHO ORYX initiative for 41 outcome measures. IH&HS also maintains patient level inpatient and outpatient databases. IH&HS recently joined with Parkside Associates and Press, Ganey Associates for a statewide patient satisfaction program for Iowa hospitals, health systems, and physician clinics. Data are not reported publicly or comparatively by hospital at this time.

3. Michigan - Since 1996, the Michigan Hospital Association (MHA) has produced an annual report representing data voluntarily provided by Michigan's hospitals and health systems. The most recent report, *2000 Michigan Hospital Report* was released to the public on the MHA Web site (**www.mha.org**) in April 2000. The report includes measures of cause-specific mortality and low birth weight along with the teen pregnancy rate by county. Indicators for comparative hospital-specific reporting include: medical and surgical cases, cesarean section and VBAC rates, nonsurgical heart cases, CABG cases, valve repairs, and hip and knee replacements. Data are available in two formats: ratings of length of stay and mortality (i.e., higher than expected, as expected, lower than expected); and graphic displays for these indicators showing actual performance and the expected range. The data are risk and severity adjusted. Background information, explanations of the measures and methods, and information on how to use the report are included. Trend data for three years are presented. Only two Veterans Administration hospitals in Michigan chose not to release their data publicly.

4. Ontario (Canada) – The Ontario Hospital Association (OHA) published its first hospital-specific report in 1999 based on hospital-specific data for 89 Ontario hospitals that provided care to 91% of all patients hospitalized in Ontario. The lengthy report includes four types of indicators: clinical utilization and outcomes (e.g., asthma readmissions, pneumonia complications); financial performance and condition (e.g., financial viability, human resources); patient satisfaction (i.e., the nine domains); and systems integration (e.g., internal coordination of care, information use and technology). Patient satisfaction is reported, based on surveys of discharged patients by Parkside Associates, Inc. Data on nine domains of satisfaction with care are reported; they include: global quality, process quality, outcome, nursing care, physician care, ancillary patient care staff, support services, and housekeeping. A global weighted measure has been calculated. The full report is available on the Web site (**www.oha.com**).

5. Wisconsin (region) - Gundersen Lutheran health system serves a 3-state region around LaCrosse, Wisconsin. A 1997 quality report (published annually) contains information on clinical measures (e.g., time to thrombolytic treatment following myocardial infarction), patient and customer satisfaction measures, access, provider measures (e.g., board certification), as well as HEDIS measures. Data are reported for the health system as a whole. The public can request copies of the report, and future posting on the Web site is planned.[25]

C. Business/Health and Other Coalition Reports

1. California – The Pacific Business Group on Health operates *California Consumer HealthScope*, an extensive and sophisticated website (**www.healthscope.org**) with comparative information on hospitals. The Web site is designed for public use and provides extensive explanations of the methods, as well as the importance and meaning of the measures. Reports compare hospitals on cesarean section rates, AMI mortality, volume of coronary artery bypass and open-heart surgeries, newborn rehospitalizations, transplants, and accreditation. The California Office of Statewide Health Planning and Development collects and maintains the data from hospitals on a range of conditions.

Another public reporting initiative is sponsored by the California Institute for Health Systems Performance (**www.cihsp.org**). This non-profit "public benefit organization" is developing standardized health care quality performance measures and reporting for the state's hospitals. Expectations were for the first public report on hospitals to be available in mid-1999 and the first patient satisfaction with hospitals report by year 2000. Funded by the California HealthCare Foundation with leadership from the California Healthcare Association, the satisfaction survey (known as, Patients Evaluation of Performance in California, or PEP-C) will use the Picker Institute survey, mailed to 600 patients for each hospital (medical, surgical and obstetrics) within a three-month period. Results of the second cycle, nine months after the first, will be reported publicly. Because this is a voluntary initiative, newspaper ads have been used recently to urge consumers to pressure their hospitals to participate.[27]

2. Cleveland – Cleveland Health Quality Choice was an early partnership among businesses, hospitals, and physicians in a four-county area surrounding Cleveland, Ohio. It was established in 1989 for the purpose of developing a system to measure and compare patient outcomes and patient satisfaction as indicators of quality in area hospitals reliably and objectively. Outcome measures included mortality, length of stay and complications. Data are collected from hospital charts by trained abstractors and entered into a system that produces diagnosis-specific risk-adjusted measures (Michael Pine, consultant) to compare hospitals. Patient satisfaction is measured by the Patient Viewpoints questionnaire, developed in collaboration with RAND, New England Medical Center, Dartmouth Medical Center, and Harvard School of Public Health. Although hospital mortality rates decreased following publication of the coalition reports, this coalition was disbanded in 1999 after 11 annual reports, when major hospital systems withdrew. Issues raised by the coalition report include appropriate risk-adjustment for performance measures and the concerns of poorly rated providers. The 1998 report was available on the Web site (**www.clevnet.cpl.org)**.

3. Heartland (Illinois/Iowa) – The Heartland Healthcare Coalition is a non-profit group of 45 employers that represent 333,000 lives in central and southern Illinois and eastern Iowa. The coalition has measured hospital performance since 1991. Report measures are primarily on cost and utilization, that is, admission rates by DRG or Major Diagnostic Category (MDC) and length of stay (LOS). Severity adjusted clinical performance reporting is based on UB-92 data that are submitted to the Illinois Hospital and Health Systems Association (IHHA), which is responsible for ensuring the accuracy of the data and reporting to the hospitals. Annual reports for the 39 hospitals in the regional area compare individual hospitals to one another, the region aggregate or national benchmarks. No reports have been released to the public. Patient satisfaction data are not collected. The coalition has

contracted with COMPdata, an approved ORYX vendor, to perform hospital data collection, analysis, and reporting (see **www.hhco.org**).

4. Houston – The Houston Healthcare Purchasing Organization (HHPO) is a coalition of 85 self-insured employers and over 5,000 small businesses that together engage in direct contracting with area health care providers. Their focus is on quality health care that will lead to stabilization of costs. A hospital report, *Quality and Performance Study*, was published in 1998 and disseminated in the *Houston Chronicle* and on the Web site (**www.hhpo.com**). Based on data collected by HCIA, Inc., it compares hospital-specific performance measures on length of stay, charges, complications, and mortality; only "top performers" are listed. The mortality index and complication index are compared to a national benchmark. There are no patient satisfaction measures for hospitals.

5. Massachusetts – In October of 1998, The Massachusetts Health Quality Partnership (MHQP) reported findings from the "MHQP Statewide Patient Survey Project."[28] The report covers patient satisfaction data based on the experience of 13,000 patients discharged from 58 acute care hospitals, accounting for more than 80% of the state's adult medical and surgical discharges and 90% of maternity discharges. The Picker Institute was selected as the vendor to collect and report on the patient satisfaction information across seven dimensions of care. Much like the collaborative effort in progress in Rhode Island, the organizations and agencies included in the Massachusetts coalition include providers, payers and purchasers. Likewise, the main focus of the effort in Massachusetts was to report on measures that would be publicly accountable, going beyond quality improvement information. However, unlike the experience in Rhode Island, the Massachusetts public report was based on voluntary participation by the hospitals. Results of the 1998 report are found on the Web site (**www.mhqp.org/statewidesurvey.html**).

A second coalition in Massachusetts is the Massachusetts Healthcare Purchaser Group (MHPG), nonprofit coalition of 55 public and private purchasers of health care. Based on information from their Web site (**www.mhpg.org)**, the coalition has focused on quality measurement in health plans. Twelve of the state's 14 health plans (as of April, 1999) participated with MHPG. In October 1998, the annual *Guide to Health Plan Performance*, was published and made available to the general public for $25 per copy.

6. Memphis – The Memphis Business Group on Health has focused on health plan reporting since 1996. In the past year, the coalition obtained the cooperation of the six hospitals in the region (all of them members of the coalition) to participate in a focused quality measurement study of heart conditions, a high cost, high volume, and high mortality problem area. The coalition joined with a panel of hospital representatives to develop quality indicators, with input from JCAHO, the American Association of Cardiology, and the HCFA Cooperative Cardiovascular Project, conducted by the Peer Review Organizations (PROs). In addition to MEDPAR database purchased from HCIA, the coalition also obtained chart-abstracted data from the Tennessee PRO. The data are aggregated in a report on the region's hospitals compared to national and HCIA "top 100 hospitals" benchmarks. The risk adjustment used HCIA's methodology. Hospitals have not yet agreed to disclose the data publicly. Two hospitals that assess patient satisfaction internally submit the data to the coalition; there is no standardized measure in use. The coalition also has begun individual physician performance reporting for outpatient visits. They are collaborating with

area physicians on the development of a patient satisfaction instrument, with some preference for a Picker-style questionnaire. No decision has been made, and cost is a barrier to vendor selection.

7. New York - The New York State Health Accountability Foundation, an independent, not-for-profit corporation funded by grants from the New York State Legislature and Department of Health, was founded by the New York Business Group on Health (NYBGH), a coalition of 148 public and private employers (including health plans, hospitals, and other providers), and IPRO (the Island Peer Review Organization for New York) to promote quality health care. Its first report, the New York State HMO Report Card,[29] provides comparative information on 30 commercial health plans, based on HEDIS measures (including performance measures submitted for New York State Quality Assurance Reporting Requirements or QARR). All HMOs in the state are required to report these standardized measures. Measures include: beta blocker after heart attack, mammography screening for breast cancer, and other preventive services, as well as overall satisfaction with the HMO. All measures were validated by IPRO. The report card was distributed to employers to promote value-based purchasing; employer distribution to employees will help disseminate comparative information, potentially stimulate competition, and facilitate consumer choice.

8. Southeast Michigan – The Southeast Michigan Employer and Purchaser Consortium includes three large automakers, a utility, a bank, and two state education associations. An extensive report is directed to members of these consortium organizations to use in making health care decisions and to the participating hospitals for quality improvement. The 1998 Consumer Guide[30] included patient satisfaction (based on surveys conducted by the Picker Institute) and hospital data from the Michigan Health and Hospital Association's Michigan Inpatient Database (for 1996). Measures are presented in a comparative format. They include severity-adjusted length of stay, mortality, complications, and cost per case for specific medical and surgical conditions, and cesarean section and vaginal birth after cesarean (VBAC) rates for childbirth care. An introductory section on "how to use this report" defines the meaning of the ratings.

9. St. Louis – A hospital report was published in 1998 by the St. Louis Area Business Health Coalition. It focuses on financial measures but does include two utilization measures – Medicaid days and Medicare days. No hospital patient satisfaction measures are available. In July 1999, the Coalition published a report on health plans in the St. Louis region compared to seven other regions in the U.S. It included health plan satisfaction based on HEDIS data. A hospital performance report is "forthcoming." (Information on this Coalition was obtained through Qualidigm telephone interview.)

10. Vermont – The Vermont Program for Quality in Health Care (VPQHC) is a non-profit corporation formed in 1988 and governed by a board of directors that includes representatives of consumers, hospitals, insurers, HMOs, employers, physicians, and state government. VPQHC measures and reports on hospital service area and health plan performance (subsuming prior reporting by Vermont Employers Health Alliance, a business coalition). The complete quality report is available to the public on the Web site (**www.vpqhc.org**). Most measures are presented for hospital service areas. Comparative data by hospital are

limited to cesarean section deliveries and VBACs. Health plan satisfaction (CAHPS survey) was last reported in 1998 to employers by the Vermont Employers Health Alliance. Reporting for this group has been subsumed by VPQHC reports. Currently, patient satisfaction data are not available.

11. Western New York – Another coalition that has reported hospital patient satisfaction is the Niagara Health Quality Coalition (NHQC), representing employers, providers, physicians and insurers in Western New York State. It is affiliated with the Buffalo Niagara Partnership, an employer organization representing 3,300 firms with more than 200,000 employees. NHQC released its first public report on patient satisfaction for 16 area hospitals in October 1999 (**www.nhqc.com**). The survey, fielded by the Picker Institute, was based on a random sample of more than 7,000 patients hospitalized from February through April 1999, yielding a 49% response rate. Hospital ratings on seven domains of care are compared to the Picker national database as a benchmark and designated as statistically significantly better, worse, or no different than national averages. Therefore, users can see how a particular hospital compares to the national benchmark but not directly to its peers. Reporting will be expanded to other hospital measures and HMOs.

IV. Perspectives on Other Reporting Activities and Issues

A. Current/Ongoing Initiatives

1. HCIA 100 Top Hospitals Report – Produced annually (currently by William Mercer Company), this report is based on HCIA data.[31] The study identifies 100 hospitals across the country that excel in clinical practices, operations, and financial management. The clinical measures include mortality and complications and are based on claims data. Hospitals are grouped by size and teaching status, and comparative data are presented by these groupings. Two of Qualidigm's Associate Clinical Coordinators, Dr. Harlan Krumholz and Dr. Martha Radford of Yale University, along with Qualidigm's Senior Analyst, Yun Wang, are co-authors of a recent article that reports on an assessment of treatment of elderly AMI patients in the top 100 hospitals compared to other hospitals, based on chart-abstracted data for the Cooperative Cardiovascular Project.[32] The authors concluded that thirty-day mortality and treatment with aspirin, beta-blockers, and reperfusion were similar, but the top 100 hospitals did have higher performance on financial and operating measures while not sacrificing clinical quality.

2. America's Best Hospitals – Published by the editors of *U.S. News & World Report* with the National Opinion Research Center at the University of Chicago, the report on "America's Best Hospitals" is distributed to the public in the weekly magazine.[33] A full report is published separately;[34] and current data on top hospitals are available online (**www.usnews.com**). The report includes only hospitals that belong to the Council of Teaching Hospitals, are affiliated with a medical school, or have more than half of the specialties and technological services on which the rankings are based. Performance measures include "reputational" score (i.e., ratings by physicians), mortality rate, and availability of staff and services. The results are presented for 16 medical specialties (e.g., AIDS, cancer, cardiology). This widely disseminated report also was evaluated by the Yale

researchers who found lower mortality at the top hospitals, associated with higher use of aspirin and beta-blocker therapy.[35] However, they also noted that these results do not necessarily confirm the ranking methodologies used to identify the top hospitals.

3. Healthgrades.com – This commercial web-based report provides hospital report cards using two data sources: MEDPAR files purchased from HCFA and state all-payer files made public by 14 individual states. Hospital outcomes (i.e., inhospital mortality, major complications) are reported by major condition (e.g., CABG, vaginal delivery, total hip replacement). Hospital ratings are calculated using risk adjustment for patient demographics and comorbidity, yielding predicted and actual values for a specific outcome. Tests of statistical significance were performed, and a rating system of stars (from five stars = best, to two stars = worse than expected) was applied. This information is available on the Web site (**www.healthgrades.com)**. This commercial reporting system has yet to be evaluated. It is presented here as an example of the types of performance information available to the public.

4. NCQA Quality Compass – NCQA collects data from health plans based on standardized measures included in HEDIS. These performance measures are reported in the NCQA Quality Compass, a national database of plan-specific information, including clinical measures and member satisfaction. This database is intended for use by employers, as well as health plans. NCQA's report, *State of Managed Care Quality*, is a national report intended for consumers. It reports similar quality measures, but in an aggregate format with explanations and information for consumers (**www.ncqa.org**). The only plan-specific publicly available information is accreditation status and results. The HEDIS satisfaction measure is derived from CAHPS, developed by AHCPR in cooperation with NCQA and HCFA to meet their reporting needs. All health plans desirous of NCQA accreditation, and those reporting HEDIS data, are expected to participate in CAHPS by submitting listings of plan members to be sampled for the survey. The survey covers not only commercially insured populations but also those in Medicaid and Medicare managed care. A number of studies are currently underway to determine consumer responses to and preferences for reporting of satisfaction data.

5. Nursing Home Profiles – As part of the strategy to produce consumer-friendly materials, HEALTH has used the internet as a medium for disseminating information of value to RI's residents in making informed health care decisions. Specifically, starting from HEALTH's home page (**www.health.state.ri.us**), consumers may access descriptive information about nursing home surveys: when and how they are conducted; which resources are available for support in selecting nursing homes; and whom to contact for more information or assistance. Further, from these introductory and background narratives, consumers are given the opportunity to compare nursing homes with performance oriented data. The Rhode Island Department of Health (HEALTH) provides a link to HCFA's Web site which contains the following types of data: bed size, ownership status; measure-specific data on the performance of a particular nursing home compared to state and national averages; and the overall results of the inspection for a given facility as compared to the state and nation. The site (**www.medicare.gov/nursing/home.asp**) was developed to permit consumers to "drill down" to the information of interest to them and to pass by items that are less relevant.

6. The Center for Studying Health System Change – Established by the Robert Wood Johnson Foundation in 1995 to study change systematically as it was occurring, the Center is also charged with assessing the effect of such change on consumers.[36] The Community Tracking Study surveys 60 communities biannually and studies 12 of them in depth to learn about how the different components of the health care system are changing and how the changes are affecting care in terms of access, cost and perceived quality. Reports are available on the 12 communities (Boston, Cleveland, Greenville, Indianapolis, Lansing, Little Rock, Miami, Northern New Jersey, Orange County, Phoenix, Seattle, and Syracuse). Hospitals and other providers are included, but no comparative data on specific providers are available.

B. Public Accountability Reporting Issues

1. Will the public respond? In an early study in California, the issue of whether quality influences hospital choice was examined for patients with specific diagnoses prior to public data reports.[37] Findings indicated that fewer patients went to hospitals with poorer than expected outcomes. The researchers suggest that quality was an important factor in consumer choice of hospitals even before the wide availability of data.[37] However, a recently published review in the *Journal of the American Medical Association* casts doubt on this assumption.[38] This synthesis of peer-reviewed evaluations of seven U.S. reporting systems, which have released public reports and have been evaluated, indicates that plan or hospital data have little impact on consumer decision-making. Indirectly, the study of the New York State CABG mortality report.[24] did find higher rates of growth in market share for hospitals with better outcomes and higher rates of growth in fees for physicians with better outcomes after the release of the report. In Minnesota, the Buyer's Health Care Action group analyzed enrollment patterns following publication of a 62-page booklet on care systems (not specific hospitals) and found that enrollment gains and losses were related to costs as much as to patient ratings.[39] However, a study of Medicare enrollees and state employees in Oregon found no statistically significant differences between those given comparative data about physician fees and the control group in use of physician services or costs of care.[40]

Few studies have directly assessed consumer responses to hospital "report cards." In 1997 and 1998, Ford Motor Company produced comparative hospital performance profiles on 46 hospitals and reported to employee, their families, and retirees.[41] Approximately 2,000 consumers were surveyed about their responses to the hospital profiles. Over half said they used them to learn more about the hospitals in their health plan, and one-fourth said the profiles helped them in discussions with their doctor. In a study of consumer response to the public Consumer Guide to Coronary Artery Bypass Graft (CABG) surgery in Pennsylvania,[42] only 20% of the patients undergoing cardiac surgery were aware of the public report, and even fewer knew about it before surgery. As noted above, studies in Missouri,[17] Pennsylvania,[18] California,[19] and Cleveland[20] found that hospitals responded to the public release of quality data and made improvements, although some have not been so receptive to public release of data, especially initial reports.[38] Moreover, physicians are skeptical about data in public reports and find it of little use with patients, based on cardiologists' responses to CABG mortality data.[38,42] Regarding health plan reports, few employers see the HEDIS performance measures as important, and few require NCQA

accreditation for health plans.[13] Similar to hospitals, an analysis of reaction to a Minnesota health plan report card found that plans responded to a greater extent than consumers and made concrete internal improvements.[43] These reports suggest that all relevant constituencies – providers, purchasers, legislators and regulators, as well as consumers of health care – need to be considered when designing and disseminating health care quality performance reports. If segments of the audience are different enough, customized versions of the report may need to be developed to address these differences.[44,45]

2. How can the report reach the public? Clearly, there are lessons to be learned from these early experiences. One important issue is how the report is disseminated to the public. Consumers may not even be aware that a report has been released. As with the Pennsylvania cardiac surgery patients, even when faced with needed services, they may be unaware of information that could help them decide which provider they would prefer.[42] Consistent with the process for dissemination of other reports by HEALTH, the media can be used to get out the message out. Both through press releases and feature articles, the information in the public report can be broadcast to the public at large to reach as wide dissemination as possible. Using known and trusted public figures in this process is an important strategy to address the general mistrust of these sources of information. Making the report available through the Internet is another dissemination strategy that is being widely used by states and other reporting organizations. This venue is readily available to HEALTH because of the established Web site that already presents reports for public access. The Michigan Hospital Association has reported that the Internet version of the *Michigan Hospital Report* receives many hits and that this is an effective strategy for disseminating the report to the public.[46] Another possible dissemination channel is the public library system.

An important strategy for reaching the public is through information intermediaries.[45,47] This concept refers to organizations with a particular constituency that makes up a segment of the public audience for the quality performance report. For example, for the Rhode Island public report on hospital patient satisfaction, information intermediaries would include organizations that represent older persons (e.g., American Association of Retired Persons; Aging 2000), minorities (e.g., Office of Minority Health; Urban League of Rhode Island), people with specific diseases (e.g., American Cancer Society, American Heart Association), and professionals (e.g., Rhode Island Medical Society, Rhode Island State Nurses Association). Such organizations have existing channels through which they contact their constituencies; they can advise on design of the report and ways to target these affected populations; they can help identify the target populations and help promote the information to them through meetings, publications, and other means; and they can help individuals understand the report and how to use it.[45,47] Information intermediaries may be useful for non-English speaking populations. To address language needs, the patient satisfaction questionnaire will be translated into Spanish and available by request.

An example of a report targeted to a segment of the audience who can also serve as information intermediaries is the Florida Hospital Association's pamphlets: *The Physician's Guide to the Hospital Performance Reports* and *The Nurses Guide to the Hospital Performance Reports*.[48] These pamphlets describe the background and intent of the comparative hospital reports, detail what is included, explain the data (e.g., risk

adjustment) and the report format, and give information about how to help patients use the Guide.

3. What should the report contain? To address this issue, attention must be given to the complexity, as well as the content, of the information presented. Three psychological factors have been suggested as important factors that can affect whether consumers can process and use the information in a public report: working memory, cognitive complexity of the report card, and thinking abilities.[49] In designing a report for the public, their ability to remember and process information simultaneously, the number of criteria needed to make a decision, and the concreteness of the information should be considered. For example, some reports present data as hospital profiles so that the reader must move from page to page in the report to make comparisons among specific facilities. Other reports present numerous criteria, and consumers must first decide which ones are important and then determine how each hospital or health plan ranks on the important criteria. This level of complexity is overwhelming for many people, especially older persons and those with lower levels of education.[49] As discussed above, information referring to positive rather than negative events is preferred,[9] where appropriate, and processes of care as well as outcomes should be considered.[11] Consumers also may need help in understanding the way the information is presented (e.g., what the "stars" or "bars" mean and how to read them) and what meaning the information has for them in terms of receiving quality care.[4] However, what consumers say they want may differ from what information they actually use in health care decision-making.[8]

Other components that have been shown to be important to include in a consumer report are: (1) the health care context in which the report was developed and produced;[50] (2) information on how to use the report;[45] and (3) contacts for additional information.

V. Recommendations for HEALTH

In proposing a conceptual model of public disclosure, Marshall and colleagues point to the potential interactions among the public release of data, the various audiences for whom it is intended, and the ultimate impact on quality of care and outcomes.[38] Based on an extensive review of the relatively few existing evaluations of public reports of quality performance data, they suggest the need for a broader perspective that focuses on public release of data as an important end in itself that may need to be articulated along with a narrower perspective that focuses on public disclosure as an intervention to change both provider and consumer behavior. These two perspectives mirror the purposes of the Fogarty legislation: public accountability and quality improvement. To achieve those purposes, as Dr. Stephen Jencks of HCFA points out, reporting performance measures is not enough; education and assistance are needed for both consumers and providers, and purchasers must "actively support not only promoting but also visibly using performance measures."[51]

Based on the literature reviewed on consumer and employer perspectives and the experience with reporting in other states and localities, a number of guiding principles can be suggested for Rhode Island's health quality performance reports.

- **Keep it simple**. The need to simplify complex concepts and to provide a context and information to help consumers understand the report has been noted above. A review of consumer response to HCFA's hospital mortality reports shows that rates were too complex to be easily understood and that a single "untoward" death had more to do with hospital choice than sophisticated measures.[52] The need for a short and concise report, alone or in conjunction with a longer report, was noted in a recent evaluation of consumer response to the CAHPS report in Washington state.[53]

- **Target the audience**. In its report to the Commonwealth Fund, the National Committee for Quality Assurance, listed this point as the first step to a successful report card.[54] It is important to understand the needs of the target audience as well as to determine what is needed in public education programs that will help consumers use these data. Others agree, and reporting directed to decision makers (i.e., providers, purchasers/employers, policy-makers) could be at a different level of sophistication from a consumer report. The importance of physicians and other health care providers in advising patients makes their role critical in helping consumers understand the reports.[48,55]

- **Use composite scores and "layering" of information.** Based on studies of consumers' responses to CAHPS, researchers have suggested that composite scores can serve to simplify survey results in a report.[56] This type of presentation means that scores on similar questionnaire items are grouped together for easier reading and worded for easier understanding. Information can be presented in such a way that interested consumers can move to the next "layer" of information, while others can easily grasp the overall picture of comparative quality based on summary information.

- **Test specific formats.** Recent data from the CAHPS demonstration projects suggests concern among consumers that the ratings do not differentiate among health plans.[57] Preferences were expressed for broader rating scales with finer categories (i.e., five points instead of three) and for description of the demographic characteristics of those completing the survey in order to be comfortable that the experience of survey respondents would reflect their own.

During the design phase, these and other recommendations embedded in this review are being used to guide the planning and development of the public reports mandated by the Rhode Island legislation. While much of what has been learned about barriers to consumer use of publicly reported quality information derives from studies of health plan data, there are parallels with hospital quality information. Combined with results from the release of hospital data, the lessons learned provide a guide for the next steps in this process.

- One process step is currently underway. The deliberations of the Public Release Work Group, established by the Measures Subcommittee of the Steering Committee to review and make recommendations on these issues, have been informed by the information presented in this review paper.

- A second process step has been suggested, once the Rhode Island data on hospital patient satisfaction are available and a public report is drafted, to assess the

response of selected audiences to the draft report through the use of focus groups, assembled through the information intermediaries and other sources.

- A third step involves the systematic evaluation of the dissemination strategies to assess the reach of the public report and the evaluation of the report's acceptability to the public through intensive interviews of random samples of the target audiences who have reviewed the report. It is hoped that these latter steps will be carried out under a grant requested from the Agency for Health Care Research and Quality by researchers at Baruch College in New York in collaboration with Qualidigm in Connecticut.

APPENDIX A

BUSINESS/HEALTH COALITIONS INTERVIEWED BY QUALIDIGM

1. Central Florida Health Care Coalition in Orlando
2. Health Action Council of Northeast Ohio
3. Heartland Health Care Coalition, Illinois
4. Houston healthcare Purchasing Organization
5. Memphis Business Group on Health
6. Pacific Business Group on Health
7. Riverside Employers for Community Health, California
8. Saint Louis Area Business Health Coalition
9. Vermont Program for Quality in Health Care, Inc.

In addition, the New York Business Group on Health has provided valuable information on coalition quality reporting initiatives in New York and elsewhere.

APPENDIX B

SELECTED CHARACTERISTICS OF PUBLICLY RELEASED COMPARATIVE HOSPITAL PERFORMANCE REPORTS BY TYPE OF SPONSOR

Area	Hospital Report Sponsor	Financial Data	Utilization Data	Clinical Measures	Patient Satisfaction	**Available** On Website
State Sponsor						
NY	State Dept. of Health, CABG Report			✔ mortality		
PA	Health Care Cost Containment Council	✔	✔	✔ mortality		www.phc4.org
UT	Office of Health Data Analysis*	✔	✔	✔		www.health.state.ut.us
VA	Dept. of Health/ VA Health Information*	✔				www.vhi.org
Hospital/Health System Sponsor						
CO	Colorado Hospital Association	✔	✔ LOS		✔	www.cha.com
MI	Michigan Hospital Association		✔	✔ mortality		www.mha.org
Ont.	Ontario (Canada) Hospital Association	✔	✔	✔	✔	www.oha.com
Business and Health Coalition Sponsor						
CA	Institute for Health Systems Performance				✔	www.cihsp.org
CA	Pacific Business Group on Health		✔	✔ mortality C-section		www.healthscope.org
OH	Cleveland Health Quality Choice		✔ LOS	✔ mortality	✔	www.clevnet.cpl.org disbanded 1999
TX	Houston Healthcare Purchasing Organization	✔	✔ LOS	✔ mortality		www.hhco.org
MA	Mass. Health Quality Partnership				✔	www.mhqp.org
MI	Southeast Michigan Employer/Purchaser Consortium	✔	✔ LOS	✔ mortality	✔	employees only
MO	St. Louis Area Business/Health Coalition	✔	✔			
NY	Niagara Health Quality Coalition				✔	www.nhqc.com

* Legislative mandate

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